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The Perspective of Concept Sustainability

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Abstract

The issue of sustainability has received various treatments over the past two decades. If in the neoclassical logic the concept of sustainable growth receives a quantitative understanding (i.e. what is called currently weak sustainability, dominant in environmental economic policies), the heterodox positions in recent years (i.e. what is named strong sustainability, ecological economics etc) rather emphasizes the qualitative side of growth (i.e. sustainable growth, human development etc). Our main intention is to argue for the last conceptual position of sustainability, where the efficient allocation of resources, the increase of employment and the inter-generational preservation of the natural environment are inherently constitutive of the concept of sustainability.

Keywords: sustainability, sustainable degrowth, human development;

Introduction

Arguing that the efficient resources allotment, occupation, environment protection etc. are compatible with an economic concept of growth is problematic without doubt. Both economy and ecology have developed for a certain number of decades as sciences that have different objectives, vocabulary and methodologies and their incompatibility has become quite inevitable. Commoner (1972), for example, argues against the problems that technology (with its fragmentary nature – the technological vice) rather than the growth of consumption, population etc. has dramatically posed to the environment, Willard and Harder (2003) suggest that important problems such as *rebound effects* (techno-eco-efficient gains turned into a higher energy and material consumption) are the result of the separate development of streams such as informational society and sustainable development, for Holling (1996) ecology talks rather about ecosystems and their functioning principles (*resilience*) while the traditional science rather belongs to the *parts* (science of parts, i.e. *analysis of specific processes that affect specific variable*), Gowdy and Erikson (2004) say that economy is still dominated by the optimal and efficiency of Pareto according to whom economy grows when at least a person gains without other person losing, which transforms economy into a science of maximizing the preferences and profit and from the prices the supreme mechanism of an efficient resources management, from which the entire ecological issue, while Goodland (1995) states the fact that the sustainability of the environment is inevitably a plural concept that is concerned with poverty, population, technology, growth etc., when at least two generations or more than ten billion people need to be fed and housed without prejudicing the environment that we depend on. Others like Ulhoi and Madsen (1999), Ost (2007), England (1997) etc. open various

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discussion paths which have in common the same problem of the isolate development between streams (economic rationality, ecological rationality – Ost 2007) and obviously the problem of the need of developing a holistic and/or integrate perspective, under the form of a *science of integrate of parts* and an adaptive management (Holling 1996) or the environment-society dialectics which could lead to a *green lifestyle* (Ost 2007) or a *basic systems approach* (Ulhoi and Madsen 1999) or to adopting the methodological pluralism, the pluralism of values and/or of multi criteria policies (Gowdy and Erikson 2004) or, simpler, a *pluralistic approach* (Tisdell 1994) or of imposing a paradigm change *away from the vision on unlimited regrowth* (England 1997) or developing new macroeconomic policies and theories that would question what can be achieved in matter of *distribution, social equity and ecological sustainability* (Harris 2001) etc.

This kind of problem we discuss here when we believe that allotment, occupation, preservation etc. can be convergent under the relation of ecological sustainability and/or preservation. The main condition is not that of opening the economic theory towards ecological and social targets, but of refocusing it towards patterns and policies of qualitative growth. Our main suggestion is that of opening the traditional pattern of growing and distribution towards less dissipative models and policies like dematerialization of economy via consumers lifestyles (Simmons 2002; Balaceanu and Apostol 2012), *sustainable regrowth* (Kallis 2011; Schneider 2010) and themes of sustainable development like poverty, more social equity, environmental etc (Tisdell 1994; Goodland 1995; Constanza 2003; Dasgupta, 2010). Fournier (2008) states this idea in an excellent way: ‘‘whilst there is a growing recognition of environmental degradation, the policies of sustainable development or ecological modernization offered by national governments and international institutions seem to do little more than ‘‘sustain the unsustainable’’. By promising to reconcile growth with the environment, they fail to question the economic principle of endless growth that has caused environmental destruction in the first place. In this context, alternatives based on critiques of growth may offer more promising grounds”.

Development, sustainability, growth or the new paradigm of development and sustainability

The main question regards the functioning of development in terms of quality when there is the problem of extending the inclusion, generating more efficient allotment and disconnecting all these from the energy consumption, non renewable materials, desertification and unsustainable emissions, when all these rather seem to restrict the economy and its capacity of contributing to the abatement of inequalities. Authors like Neumayer (2004, 2010) argued, for example, for the problems posed by economic growth, development and ecological sustainability.

Other extremely relevant terms are weak/strong sustainability. The entire debate and the solutions that have been provided are focused towards these trends and concepts. The central and problematic issue is trying to satisfy the needs of the present without prejudicing the following generations’ capacity of equally satisfying their own needs (Brundtland Commission 1987). There is no such thing as a sustainability concept able to be adapted to a different situation; ecologists and economists at the same time continue to remain separated in the manner in which they understand to approach the issues of growth, development and sustainability. What we are trying to show is the relation between concepts such as development, strong sustainability, sustainable degrowth and sufficient allotment, the latter being closely related to the neoclassic tradition of economic growth. The growth of the Gross Domestic Product cannot work as an indicator of welfare, for example, wealth per capita can regrow when the GDP per capita grows (Sen 2000; Dasgupta 2010). Growth can only be qualitative or focused on the problems of income, health and education (basic needs), if it is to address welfare or be compatible with the environment; there is proof that shows, for example, that Japan’s early massive investment in education and health had prepared it for the techno-economic leap after the war, others show that economies with low GDP values can expose much higher levels on indicators such as mortality, poverty etc. as compared to other countries with higher GDP values (Sen 2000). Under these circumstances, the development of an efficient eco-sustainable allotment concept is crucial (Chichilnisky 2001, 2006) so that satisfying the needs involves the production of goods, and this production inevitably interferes with marginal allotment and distribution generated by the market and/or prices dynamics. Anyway, economy cannot be demitted in all that means efficiency, growth etc, but it can enlarge its targets towards qualitative development or growth (Sen 2000; Constanza 2003) and environment (Dasgupta 2010) and there can be found solutions at the level of policies and paradigms from less exploited areas such as sustainable regrowth, strong sustainable consumption, immaterialization of consumer lifestyle etc. (Schneider 2012; Simmons 2002).

Quality vs. quantity growth and/or weak vs. strong sustainability

What has become clear in the last few years is that an economy based exclusively on the dynamics of prices, the cost of opportunity, the Parreto optimality, accumulation, maximization of utility and/or profit, comparative advantaged which use the GDP's per capita growth as an indicator of welfare is unsustainable and problematic. The great majority of the studies show that these instruments had been thought isolated from the eco-natural limits' signals (that are very old, for example Malthus, Jevons, Mill) and/or the environment's capacity of assimilating the effects of soil, consumption or emissions exhaustion etc. The main current task is probably that of reintegrating economy and/or society inside the natural sustainability limits (Commoner 1972; Holling 1996). The *more with more* principle which is specific to an industrial society must be abandoned, and, in turn, the *more progress with fewer resources* principle must be placed at the basis of the relationship between economy, society and environment.
The alternative to the traditional growing pattern seems to be a paradigm based on social and ecologic targets, rather than on maximizing the utility (strong sustainability/quality growth). The main problem that arises here is that a concept like *strong sustainability* is normative and ethical rather than analytical and operational (Dietz and Neumayer 2006). The main argument is that what determines the following generations' ability of developing wellbeing/utility is the quantity and quality of the capital goods that are at their disposal. In other words, a sustainable economy cannot be separated from its productive capacities, that have to produce more wellbeing for future generations and it is based on substituting various forms of natural and manufactured capital (Pearce and Atkinson 1998). The main accusations brought to this position are those regarding the fact that the natural capital is generally underrated, and a great part of the economy's effects on the environment are irreversible, unknown and incontrollable (Chichilnisky 1995, 1998), finally it is based on an exaggerated optimism under the circumstances in which the technological progress tends to generate *rebound effects* and the market to internalize the benefits and socialize the costs; the substitution of manufactured capital for natural non renewable capital is problematic as it is limited and especially because the production of manufactured capital is based on matter and energy consumption which cannot be substituted (Daly 1997). On the contrary, a concept of *strong sustainability* rejects the optimism based on a continuous growth, the prices market dynamics (as the only efficient instrument of allotment and distribution) and the environment's fungible character and insists upon the idea that sustainability is the equivalent of the ability of providing to the following generations the same level of non renewable resources and/or quality of environment; in what concerns the growth, the strong sustainability is rather focused on aspects that are related to development and life quality and not on accumulation, consumption growth, growth of the Gross Domestic Product etc. (Ayres, van den Bergh and Gowdy 2000). The difficulties, advantages and applications determined by the concepts of *weak/strong sustainability* are largely discussed by Goodland (1995), Rennings and Hohmeyer (1997) and Dietz and Neumayer (2006).

Efficient allotment and sustainability regrowth
The question of allotment is obviously inherent, especially because the fact that without efficient allotment the production would rise over the marginal cost, losing resources and energy etc. We think that allotment can be integrated in paradigms of de/growth and development that would be totally different from the tradition they are a part of. The problematic aspect is the scale dimension of allotment and growth. But this leads to the situation in which a finite ecosystem such as earth's ecosystem cannot sustain a continuous growth of economies, the introduction of new needs etc.
The main issue of allotment is what Chichilnisky (2001) calls *tragedy of commons*. What places economy and ecology on antagonistic positions is probably the manner in which the market functions in relation to the negative externalizations that it produces. The tendency of the market is to internalize the benefits and socialize the externalities/costs. A way of questioning this difficulty and reflecting the Kyoto Protocol's policy (1997) is provided by Chichilnisky (2001, 2006). Emissions, deforestations etc. can be approached, just like knowledge, as public goods produced in the private sector. If knowledge is non-rival and/or globally available especially thanks to the new information technologies, the CO_2 emissions reflect the same infinite expansibility, being global. Both knowledge and CO_2 are generated by various privates. In other words, they are both public goods produced in private sectors. The implications of this treatment are immediate and institutional and bring on the same level issues of development and equitation with the decrease of damage over the environment. The most important move is

probably that of the trade in public goods. As public goods like CO_2 emissions, various ideas, blueprints (are infinitely expansible in the sense of providing services and advantages/disadvantages) etc. are private products, a new institutional system or a new property rights regime is necessary. Chichilnisky argues for a market of trading the property rights such as polluting or using the atmosphere (global emission markets), which makes possible both the negative externalizations' internalization through the policy of rights (or opposing the market's tendency of socializing costs) and the possibility of reducing the emissions as a result of a better costs-benefits alignment; the opening of economies towards newer and more ecological forms of production (knowledge society) is strongly stimulated. The elements that separated the public goods markets from the private goods markets are the principles of efficiency and equity, which are separated in traditional markets with private goods, are now correlative to public goods markets. Therefore, less polluting economies or those which depend more on natural resources without being as pollutant as the industrialized economies, have more right to pollute; the economies that pollute more have fewer polluting rights, but they have to pay more in order to gain more rights. These regulations are stipulated in the Kyoto Protocol (2005) which becomes an international right (Chichilnisky 2006). The equitation and efficiency principles meet especially when it comes to the private identification of public goods (non-rival). Both equity and efficiency specific to transactions and market allotment are to be found here; the market is not eliminated, but under the new institutional arrangement it produces more equity, not just efficiency. Under these circumstances, Chichilnisky (2001, 2006) believes that the relation between North (industrial) and South (natural resources), based especially on exploiting comparative advantages, could be modified in the direction of a better equity, efficiency and sustainability, which seem to generally characterize knowledge and informational society.

The debate of sustainable regrowth is extremely instructive here. Probably the main problem of input forms with growing outputs (knowledge, innovation and almost every types of organizational complementary capital) is that they cannot be easily separated from the so called *rebound effects*. The disadvantage of Chichinisky's argumentation is that the dematerialization of economies and/or the extension of the informational society are not/are *ipso* sustainable. In other words, even if the knowledge and/or innovation production faces us with the situation of generating more output without turning to bigger physical amounts of inputs, the final result is not necessarily a decrease of raw materials and energy consumption, on the opposite. A whole series of studies argues that for generating *rebound effects*, which accompanies economies' dematerialization (Schneider 2008, Bălăceanu and Apostol 2012). Under these circumstances, it is the case of seriously taking into consideration the *regrowth* debate, which insists especially upon bringing the economy back in the perimeter of the environments' sustainability, by means of voluntary democratic decisions and refocusing the policies towards satisfying the basic needs and/or quantitative development (Fournier 2008; Schneider 2010).

In other words, even if economies dematerialize at a large scale, the incremental degradation of the environment is deferred, not avoided. The decrease of consumption or the change of consumer lifestyle, the reassessment of economies on development (quality) rather than on growth (quantity), the difference between efficiency and growth (the decrease does not mean that efficiency is abandoned, but the growth beyond the environmental sustainability limit and innovation frugality – Schneider 2010), the renegotiation of the role of property in concentrating the benefits and costs socialization etc., all these are topics of the decrease debate. An approach of economies' dematerialization in the perspective of sustainability must be inevitably confronted with rebound effects. But this thing reopens the discussion regarding a concept of strong sustainability rather than an approach exclusively based on maximizing the utility and/or the growth of the Gross Domestic Product.

Conclusion

Obviously, the issue of sustainability has received various treatments over the past two decades. Our main intention was to argue for a heteredox conceptual position of sustainability, where the efficient allocation of resources, the increase of employment and the inter-generational preservation of the natural environment are inherently compatible with a concept of sustainability (Chichilnisky 2001, 2006). What we have identified is both the science's fragmentary character and the environmental degradation, these being the results of an isolate development of different objectives and methodologies (economy vs. ecology), as well as their need of adapting their means and targets. Therefore, the revision of the traditional growing and development economic pattern is without doubt inevitable. The studies regarding the abatement and the success of internalizing the damage upon the environment

by means of developing a global market of pollution rights bring a new perspective in what regards the debate of sustainability and abatement.

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